NASA/C3P
2010 INTERNATIONAL WORKSHOP ON ENVIRONMENT AND ENERGY

Concept for Student Presentations

1 Objective

The National Aeronautics and Space Agency (NASA) and the Center of Pollution Prevention Program in Portugal (C3P) intend to raise awareness with students for the latest technologies, especially towards environmental and alternative energy strategies. The workshop will provide opportunities for students to meet and work with other students from other universities and countries on projects related to

- Materials management and substitution including lead free electronics
- Remediation technologies and strategies
- Emerging renewable and alternative energy technologies
- Encroachment risk analysis and mitigation
- Adaptive response to climate change
- Green sustainable development and redevelopment
- Recycling and pollution control

The projects should be of interest to NASA, represent new ideas or take a fresh look at existing designs, models, or concepts in the above areas. The student involvement will encourage exchange of ideas and information, creative thinking, and projects that are presented could meet interest of any of the sponsors and lead to research initiatives, or further development of the projects.

2 Sponsors and participants

NASA and C3P
Raise interest in space, energy and environmental challenges, and provide an opportunity to share new ideas that could lead to new projects and research

Industry
Get access to talent for future employment

Undergraduate students:
Work on interesting research projects for course credit, network, gain access to subject matter experts in industry

Graduate students
Support and knowledge for their PhD thesis, publications, networking with potential employers

Professors
Get scientific merit, publications, reputation, build contacts with other universities

3 Process

The workshop provides an opportunity to facilitate partnerships among U.S., Portugal, Industry and government agencies for identifying and integrating commercially available and new pollution prevention solutions, practices, and procedures into manufacturing and maintenance processes and installations.

Students from different universities and countries are invited to the workshop and given an opportunity to present their work and ideas in identified technical areas. Universities take the lead in selecting students and working together providing an environment and opportunities for students of different universities to interact. In preparation for the workshop students can join together in a team to work on projects finding solutions to shared technical challenges. Thus the students learn to work on a complex and diverse team.

Working on topics that are addressing challenges the industry is facing today, allows the teams to connect with future employers, and they will learn how industry works vs. academia. In order to bring value, these teams need to be supervised by business professionals. Scientists and professors of participating universities and institutions can act as co-advisors to these industry supervised teams.

The workshop brings industry and universities together, providing a platform to start collaboration and select future student projects of merit. Students present their projects and posters at the annual workshop in form of single presentations, team presentations, or competitions.

4 Resources

The following conditions are seen as essential to successfully run such a concept:

- Each team needs to be sponsored with a budget throughout the project. This is for covering expenses for travels, jugular experiments, etc.
- Companies have to provide employees passionate about working with students.
- The dean and professors have to support this idea (e.g. by giving study credits).
- Students need to contact their advisors before submitting abstracts and/or posters to qualify for any financial support universities may offer.
- NASA or CP3 will not provide any financial assistance, stipends, travel assistance, or paid lodging, however can make in-kind contributions (workshop, other)

5 Contacts:

UCSD	Jan Kleissl	jkleissl@ucsd.edu
NASA	Holger Fisher	Holger.o.fisher@nasa.gov